

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

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| In the Matter of                            | ) |                     |
|   | ) |                     |
| Establishment of Policies and Service Rules | ) | IB Docket No. 01-96 |
| for the Non-Geostationary Satellite Orbit,  | ) |                     |
| Fixed Satellite Service in the Ku-band      | ) |                     |

**REPLY COMMENTS OF PANAMSAT CORPORATION**

PanAmSat Corporation ("PanAmSat"), by its attorneys, hereby files these reply comments concerning the Commission's Notice of Proposed Rulemaking ("NPRM") in the above-captioned proceeding.<sup>1</sup>

**BACKGROUND**

In its initial filing in this matter, PanAmSat commented upon the four options that the Commission had identified for NGSO FSS systems to share Ku-band spectrum with one another. PanAmSat stated that it had no objection to the band segmentation approach of options 1 and 2, which would limit the aggregate interference received by GSO FSS operators and would make aggregate limit verification unnecessary if the number of licensees were three or less per band segment. PanAmSat also took no exception to option 4, which by requiring homogeneous systems would produce a well-defined sharing environment and efficient use of the spectrum.

The only option PanAmSat has an issue with is option 3. Under this option, NGSO FSS systems would use satellite diversity and frequency isolation to avoid interference to one another when they are in line. On the other hand, the Commission was not proposing to take steps to prevent interference when

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<sup>1</sup> FCC 01-134 (May 3, 2001).

NGSO FSS systems are not in line, finding that “whenever in-line interference events are not a threat ... inter-system interference is minimal.”<sup>2</sup>

In their comments, SkyBridge LLC (“SkyBridge”), Teledesic LLC (“Teledesic”) and The Boeing Company (“Boeing”) all support option 3. PanAmSat hereby replies to those parties. For reasons that are discussed below, option 3 does not take into account the potential for NGSO FSS systems, in the aggregate, to interfere with GSO FSS systems when the NGSO FSS systems are not in line.<sup>3</sup>

## DISCUSSION

SkyBridge, Teledesic, and Boeing confine their discussion of option 3 to one side of the interference equation. They all focus on the need to avoid inter-system interference when NGSO FSS systems are in line. They propose various measures for addressing this interference issue.

The vast majority of the time, however, NGSO FSS systems will not be in line. Under option 3, in the absence of an in line event these systems would be free to operate simultaneously, co-frequency, across the full range of NGSO FSS spectrum. It is imperative in these circumstances that the Commission implement the aggregate EPFD<sub>down</sub> limits that were adopted at WRC-2000 to protect GSO FSS systems from interference.

SkyBridge, Teledesic, and Boeing do not meaningfully address this issue. They are silent on the issue in the context of their discussion of option 3. And although SkyBridge and Boeing discuss the issue of the aggregate limits generally, they merely propose that the Commission proceed with licensing NGSO FSS systems now, but not adopt aggregate limits until an indefinite date in the future, after the ITU working

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<sup>2</sup> NPRM ¶ 32.

<sup>3</sup> See PanAmSat Comments at 6.

groups have studied the issue.<sup>4</sup> They posit that the Commission should not be concerned with the possibility that NGSO FSS systems will, in the aggregate, cause harmful interference to GSO FSS systems, based on the fact that it takes more than three NGSO FSS systems to exceed the aggregate limits.<sup>5</sup>

This approach – “license now, deal with aggregate limits later” – is a recipe for disaster. As discussed in PanAmSat’s initial comments, the Commission is planning to license all seven proposed NGSO FSS systems, not 3.5 systems, and unless it requires a showing it will have no way of knowing whether these systems collectively exceed the aggregate limits. If the Commission waits until the ITU adopts final regulations before it conducts a rulemaking addressing a methodology for compliance with the aggregate limits, there will be nothing to prevent multiple NGSO FSS operators from constructing their systems, commencing operation, and exceeding the aggregate limits. GSO FSS systems should not be subjected to this interference risk.

The aggregate EPFD<sub>down</sub> limits and the Commission’s NGSO licensing decisions are inextricably linked. The Commission should not be licensing multiple NGSO FSS systems without having a plan in place for ensuring that the aggregate limits will be satisfied. At a minimum, such a plan would include a methodology for determining whether NGSO FSS systems exceed the aggregate limits, and a mechanism for ensuring, in advance, that the aggregate limits are complied with no matter how many systems are licensed and become operational. Once NGSO FSS systems are operational and customers rely on them, it will be difficult for the Commission to require them to curtail their operations for purposes of the aggregate limits in order to make way for new entrants systems. The time to evaluate compliance, therefore, is in the licensing phase.

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<sup>4</sup> See SkyBridge Comments at 25-26; Boeing Comments at 12-14.

<sup>5</sup> Id.

As also discussed in PanAmSat's initial comments, the Commission has available to it all the tools needed to formulate such a plan. There already exists a widely accepted methodology for evaluating whether the aggregate EPFD<sub>down</sub> limits have been satisfied.<sup>6</sup> It is possible, moreover, to address the aggregate interference while proceeding in a timely fashion with licensing decisions.<sup>7</sup>

It may be necessary, it is true, to employ band segmentation to achieve these objectives, and option 3 and band segmentation are incompatible. But if the only way to ensure compliance with the aggregate limits is band segmentation, then it is far preferable to take that issue head on prior to licensing than to address it after the fact, once NGSO FSS operators have invested billions of dollars in their systems and have not been given notice that, by virtue of the aggregate limits, they cannot use the full range of NGSO FSS frequencies.

#### CONCLUSION

For the reasons set forth and in PanAmSat's initial comments, the Commission should adopt rules requiring NGSO FSS applicants to demonstrate, prior to licensing, that the aggregate EPFD<sub>down</sub> limits have been satisfied.

Respectfully submitted,

PANAMSAT CORPORATION

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<sup>6</sup> See PanAmSat Comments at 2.

<sup>7</sup> Id. at 3-5.